

Remarks

Claims 24, 27 and 34-36 have been rejected over Miller et. al U.S. Patent No. 4,068,379, while the remaining claims are rejected only under 35 U.S.C. §112, second paragraph, but indicated as otherwise allowable.

Claims 27 and 34-36 are being canceled without prejudice to pursuing the claimed subject matter in a divisional or continuing application. Amendments are made to claim 1 and certain dependent claims to clarify the claims by substituting “pad” for “base”, which was ambiguous.

Applicant thanks the Examiner for the constructive explanation of his position regarding the points made in Applicant’s previous response. In light of that explanation, claim 24 is amended to be of intermediate scope between its previously presented form and claim 1. In order to more completely claim Species I, claim 24 is being narrowed to both focus on Species I and to avoid the broad interpretation pointed out by the Examiner that resulted in the rejection over Miller et al. of previously presented claim 24. New dependent claim 57 is also of intermediate scope and is added to more specifically claim the illustrated embodiment of Species I. These intermediate claims raise no new issues.

It is emphasized that Miller et al. does not teach that one should have flexibility in the connection between a bonding base mesh and a bracket. Miller merely points out that, “if only a few spot welds are utilized, the mesh flexes so that the effectiveness of the appliance in the orthodontic treatment diminishes.” Miller’s point is that many welds are necessary to prevent flexing, which is deemed by Miller as undesirable. Maximum “effectiveness of the appliance” requires that the elastic archwire urge the teeth to their correct final positions as the wire tends to return its unstressed shape. In other words, the appliance system must have a memory, which is the principle of the “straight-wire” appliance. If the bracket were to “flex” in an unpredictable way, as Miller et al. essentially point out, the teeth will not necessarily end up in the correct positions when the archwire stress is relieved. As a result, the effectiveness of the appliance is compromised.

In claim 24, Applicant recites the interface, which is found between the bonding structure and the bracket in Species I, and as being "resilient". This claim has been amended to state that the interface is "elastically resilient" and that it is situated between the bonding structure and the bracket. Paragraph 31 and the detailed description of Species I in the specification describes the flexibility of the interface as "elastic". An elastic interface would not present the problem to which Miller et al. refer when cautioning that the bracket should not "flex". While in some of the non-elected species, a flexible or compliant interface need not be elastic, where the interface lies between the tooth and an archwire, any permitted flexing should be elastic for the appliance to be effective. An elastic interface would not fall into the category referred to by Miller et al.

Accordingly, it is submitted that claim 24 is patentable over Miller et al.

The remaining claims include amendments to overcome the objections to the specification and the rejections to the claims under 35 U.S.C. §112, second paragraph. In particular, the term "base" is replaced in the claims with the term "pad" to overcome the inconsistency with the specification as pointed out by the Examiner. It is submitted that this overcomes the objection to the specification and the rejections to the claims based on 35 U.S.C. §112.

For the reasons stated above, it is submitted that the pending claims, as amended, are allowable. Accordingly, an early allowance is respectfully requested.

If any charges or credits are necessary to complete this communication, please apply them to Deposit Account 23-3000.

Respectfully submitted,

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